

(12) **United States Patent**
Wang

(10) **Patent No.:** **US 9,636,603 B2**
(45) **Date of Patent:** **May 2, 2017**

(54) **HAND-HELD CRACKER SNAP SPRAYING PROJECTILE**

(56) **References Cited**

U.S. PATENT DOCUMENTS

(71) Applicant: **Yu-Jen Wang**, Taichung (TW)
(72) Inventor: **Yu-Jen Wang**, Taichung (TW)
(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

5,015,211 A * 5/1991 Reveen A63H 37/00
124/74
5,338,242 A * 8/1994 Cheng A63H 37/00
446/183
5,471,968 A * 12/1995 Lee F41B 11/89
124/59
5,634,840 A * 6/1997 Watkins A63H 37/00
446/475
8,876,574 B2 * 11/2014 Bourdelaise A63H 37/00
446/399
2006/0199469 A1 * 9/2006 Du A63H 37/00
446/475
2008/0311822 A1 * 12/2008 Kim A63H 37/005
446/475

(21) Appl. No.: **14/876,829**

(22) Filed: **Oct. 7, 2015**

(65) **Prior Publication Data**

US 2016/0339353 A1 Nov. 24, 2016

* cited by examiner

Primary Examiner — John Ricci

(30) **Foreign Application Priority Data**

May 20, 2015 (CN) 2015 2 0326434 U

(51) **Int. Cl.**

A63H 37/00 (2006.01)
F41B 11/24 (2006.01)
F41B 11/66 (2013.01)

(52) **U.S. Cl.**

CPC **A63H 37/00** (2013.01); **F41B 11/66**
(2013.01)

(58) **Field of Classification Search**

CPC **A63H 37/00**; **F41B 11/66**
See application file for complete search history.

(57) **ABSTRACT**

A hand-held cracker snap for spraying projectile includes a main unit, a button, a disk, an air cylinder and a nozzle. The button is loosely disposed in the main unit. The disk is disposed in the main unit and is connected to the button. The air cylinder is disposed in the main unit and is provided with a central tube that can be extended or compressed along an axis repeatedly to suck or squeeze air to or from the air cylinder. The nozzle is a tubular element in the connecting pipe. An end of the nozzle is connected to the interior part of the air cylinder, allowing air to enter or exit the air cylinder via the nozzle. The nozzle guides air into the bullet.

7 Claims, 8 Drawing Sheets

